5

Abstract Of The Invention

A system has a stratospheric platform with a payload controller and a phased array antenna having a plurality of elements. A gateway station communicates with the stratospheric platform. The gateway station scales the plurality of elements to form a reconfigurable plurality of beams. The gateway station communicates a control signal to the stratospheric platform to communicate a scaling of the elements. The stratospheric platform configures the elements of the phased array antenna according to the scaling using adaptive interference rejections.